

Abstract

Aerofoil

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An aerofoil 1 includes cooling channels 2,3,4,5 with transfer passages 8 between adjacent channels 2,3,4,5. In normal operation, the constriction in each cooling channel 2,3,4,5 ensures direct through coolant airflow in the direction of arrowheads A. However, when a channel 4 is blocked by a blockage 9 airflow in adjacent channels 2,5 is forced through the transfer passages 8 in order to provide airflow in the blocked channel 4 and facilitate cooling. This blocked channel airflow is in the direction of arrowheads B. Generally, the cross-section of the transfer passages 8 is determined for conformity with the outlet 7 cross-section of the channel 4 in order to achieve substantial coolant flow balance across the coolant channels 2,3,4,5 of the aerofoil 1.

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